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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,437	05/20/2000	BARBARA A FOX	10.0776	8670

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EXAMINER	
AVELLINO, JOSEPH E	
ART UNIT	**PAPER NUMBER**
2143	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/574,437	FOX ET AL.	
	Examiner	Art Unit	
	Joseph E. Avellino	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2005* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,8-16 and 20-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,8-16 and 20-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-4, 6, 8-16, and 20-55 are presented for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 20, 2005 has been entered.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 6, 10-14, 21, 22, 27-29, 31-40, 42, and 50-55 rejected under 35 U.S.C. 103(a) as being unpatentable over Factor (USPN 6,272,523) in view of Marques et al. (USPN 6,643,706).

4. Referring to claim 1, Factor discloses a computer system, comprising:

a plurality of hardware resources (physical processes/servers) (Figure 2, reference characters 28, 30, and 32);

a plurality of logical resources (logical processes) (Figure 3, reference characters 42, and 44);

a plurality of functional processes (web browsers/applications from clients) (Figure 3, reference character 36; col. 3, lines 53-65);

a configuration process for configuring certain of the plurality of functional processes on particular ones of the logical resources (col. 3, lines 53-57); and

a mapping process for creating a map associating the plurality of hardware resources with the plurality of logical resources (e.g. abstract; col. 6, lines 27-32).

Factor inherently includes an operating system, since without it, the server would not be able to perform the functions which were described. However Factor does not specifically disclose an operating system that includes memory management which supports a protected memory model, wherein a process is assigned a unique or separate protected memory block, such that processes may be started, upgraded or restarted independently of other processes. In analogous art, Marques discloses another computer system which discloses another operating system that includes memory management which supports a protected memory model (i.e. isolated fault occurrences), wherein a process (i.e. threads) is assigned a separate (i.e. own) protected memory block (col. 5, lines 50-60). Although it is not stated expressly that the processes may be started independently of other processes this would be an inherent feature of the system since each thread is isolated, that in order for a thread to crash as expressly taught by Marques, it must be started, and as such if the thread resides in its own memory space, it is independent of other threads. It would have been obvious to

one of ordinary skill in the art to combine the teaching of Marques with Factor since, as one of ordinary skill in the art would know, Factor inherently requires an operating system to execute the application programs running, however does not recite any specifics or configurations as to the operating system. This would lead one of ordinary skill in the art to find other network operating systems, eventually finding the OS of Marques.

5. Referring to claim 2, Factor discloses the computer system is a network device and wherein the mapping process is a network management system process (col. 6, lines 4-10).

6. Referring to claim 10, Factor discloses a method and system of operating a computing system as stated in the claims above. Factor does not disclose the functional processes include device driver processes, however it is suggested by the prior art that this feature would be obvious to include to the system of Factor to allow the flexibility of adding servers to allow communications to occur with other devices.

7. Referring to claims 11 and 12, Factor discloses a method and system of operating a computing system as stated in the claims above. Factor does not disclose the functional processes include an ATM network protocol application, however it is suggested by the prior art that this feature would be obvious to include to the system of

Factor because ATM networking is well known in the art of networking and is an alternative to the standard Ethernet networking system.

8. Referring to claim 27, Factor discloses the process comprises a first process, the logical resource comprises a first logical resource and the physical resource comprises a first physical resource and further comprising:

configuring a second process (client/application) on a second logical resource (col. 6, lines 4-32; Figures 3 and 5); and

applying the configured second logical resource to a second physical resource (col. 6, lines 4-32; Figures 3 and 5).

9. Referring to claim 28, Factor discloses the first and second processes (clients/applications) are the same process (col. 6, lines 33-39).

10. Referring to claim 29, Factor discloses the first and second processes (clients/applications) are different processes (col. 6, lines 4-32) (it is inherent that when Factor discloses an embodiment of the invention to be used on the Internet (col. 6, line 6) that there are multiple clients to access multiple logical processes).

11. Referring to claim 31, Factor discloses the first and second logical resources are the different logical resources (col. 6, lines 10-12).

12. Referring to claim 32, Factor discloses a method of operating a computing system as stated in the claims above. Factor does not necessarily state that the first and second physical resources are the same logical resource, however it is suggested by the prior art that it would be obvious that the first and second physical resource can be the same to allow multiple logical resources the opportunity to interface with that particular physical resource (i.e. multiple proxy servers interfacing with one content server).

13. Referring to claim 33, Factor discloses the first and second physical resources are the different hardware resources (one-to-many mapping resources) (col. 3, line 66 to col. 4, line 15).

14. Referring to claims 34 and 35, Factor discloses a method of operating a computer system as stated in the claims above. Factor furthermore discloses filling in a plurality of fields in a plurality of tables in a database for mapping logical processes to physical processes (col. 4, lines 1-6). Factor does not disclose that configuring a process on a logical resource comprises filling in a plurality of fields in a plurality of tables in a configuration database. However it is suggested by the prior art that it would have been obvious to incorporate the teaching of mapping logical to physical processes to functional processes on a logical resource to keep track of specific settings and configurations necessary for the process to interact with the logical resource.

15. Referring to claim 36, Factor discloses a method of operating a computer system as stated in the claims above. Factor does not disclose the plurality of tables comprise an application group table, however it is suggested by the prior art that it would have been obvious to incorporate an application group table to the system of Factor to reduce the overall complexity of the system while allowing for monitoring tools to determine which applications are degrading the overall performance of the system.

16. Referring to claim 37, Factor discloses a method of operating a computer system as stated in the claims above. Factor does not disclose the plurality of tables comprise an application interface table, however it is suggested by the prior art that it would have been obvious to incorporate an application interface table to the system of Factor to determine the interaction between the applications and to increase the overall performance of the system, while further reducing complexity and user monitoring.

17. Referring to claim 38, Factor discloses a method of operating a computer system as stated in the claims above. Factor does not disclose the plurality of tables comprise a service end point table, however it is suggested by the prior art that it would have been obvious to incorporate a service end point table to reduce overall complexity of the system and to easily determine what resources are currently being used by which users of the system.

18. Referring to claim 39, Factor discloses assigning a logical identifier to the physical resource (col. 5, line 43 to col. 6, line 4).

19. Referring to claim 40, Factor discloses filling in a field in a table in a configuration database (col. 4, lines 1-15).

20. Referring to claim 42, Factor discloses the logical resource represents a physical hardware module (i.e. server) and the physical resource comprises the physical hardware module (Figures 2-3; col. 5 line 43 to col. 6, line 32).

21. Referring to claim 50, Factor discloses the logical resource comprises a logical identifier (col. 5, lines 61-64).

22. Referring to claim 51, Factor discloses the computer system comprises a network device (i.e. server) (Figures 1-3).

23. Referring to claim 52, Factor discloses configuring the process on the logical resource comprises:

configuring network connectivity on the logical resource (allow the logical process access to the network to connect with the physical processes) (col. 4, lines 16-34; Figures 1-3);

configuring a process on a logical resource (interact with clients/applications (col. 3, lines 52-55);

applying the configured logical resource to a physical resource (col. 4, lines 1-15).

24. Referring to claim 53, Factor discloses a method of operating a computer system as stated in the claims above. Factor does not disclose adding the physical resource to the computer system, wherein applying the configured logical resource to the physical resource is delayed until the physical resource is added to the computer system. However it is suggested by the prior art that it would have been obvious to add the physical resource to the computer system, wherein applying the configured logical resource to the physical resource is delayed until the physical resource is added to the computer system for increased flexibility in that adding servers or replicating processes can all be done within the interface system totally transparent to the client as supported by Factor (col. 6, lines 1-4).

25. Referring to claim 55, Factor discloses the process comprises an application (col. 3, lines 53-55).

26. Claims 6, 13, 14, 21, 22, and 54 are rejected for similar reasons as stated above.

Claims 23-26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Bruck et al. (USPN 6,088,330) (hereinafter Bruck).

27. Referring to claims 23, 24, and 26, Factor discloses a method of operating a computer system as stated in the claims above. Factor does not disclose detecting a fault on the physical resource, failing over from one resource to another and applying the logical resource to the other physical resource. Bruck discloses:

detecting a fault on the physical resource (col. 2, lines 23-40);

failing over from the physical resource to a second physical resource (col. 2, lines 23-40); and

applying the configured logical resource to the second physical resource (col. 2, lines 23-40).

28. Referring to claim 25, Factor in view of Bruck disclose a method of operating a computer system as stated in the claims above. Factor in view of Bruck do not disclose the event includes a resource consumption notification, however it is suggested by the prior art that it would have been obvious to modify the system of Factor and Bruck to include a resource consumption notification to monitor the relative health of the resource (i.e. link, switch, router, etc.) and to determine if the resource is overused or underused.

29. Referring to claim 30, Factor discloses a method of operating a computing system as stated in the claims above. Factor does not disclose that the first and second logical resources are the same logical resource. Bruck discloses the first and second logical resources are the same resource (col. 2, lines 23-35). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Bruck and Factor to allow logical resources to switch physical resources when a physical resource is not working or has been deactivated.

Claims 3, 4, 8, 9, 15, 16, 20, 41, and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Allen et al. (USPN 5,704,041) (hereinafter Allen).

30. Referring to claims 8, 9, 20, and 43-45, Factor discloses a computer system as stated in the claims above. Factor does not disclose that the hardware resources include line cards. Allen discloses that physical resources include computer cards (col. 1, lines 25-35). From this, It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Factor with Allen to allow multiple components of a computer to be represented by objects to be monitored and itemized to facilitate monitoring and inventory.

31. Referring to claims 3-4, 15, 16, 41, Factor in view of Allen discloses a computer system as stated in the claims above. Factor in view of Allen does not disclose the

table comprises a logical to physical card table, however it is suggested by the prior art that this feature would have been obvious to one of ordinary skill in the art to include to the combined system of Factor and Allen to allow the logical and physical cards to be mapped to each other, facilitating associations between resources as well as for simplified access to important information.

32. Referring to claims 46 and 47, Factor in view of Allen disclose a computer system as stated in the claims above. Factor in view of Allen do not disclose that the physical hardware module comprises a central processing board, but rather a card, however the prior art suggests that this feature would have been obvious to one of ordinary skill in the art to include to the combined system of Factor and Allen to further expand the number and types of physical resources available to be instantiated as an object for facilitated monitoring and inventorying.

Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Davis et al. (USPN 6,477,566) (hereinafter Davis).

33. Referring to claim 48, Factor discloses a method of controlling a computer system as stated in the claims above. Factor does not disclose the logical resource represents a physical port on a forwarding card and the physical resource comprises the physical port on the forwarding card. Davis discloses a the logical resource which represents a physical port on a forwarding card and that the physical resource

comprises the physical port on the forwarding card (col. 17, lines 14-27). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Davis with Factor to facilitate monitoring and management of physical resources by associating a template with the resource to facilitate message passing between the resources as supported in Davis (e.g. abstract).

34. Referring to claim 49, Factor discloses a method of controlling a computer system as stated in the claims above. Factor does not disclose the logical resource comprises a service endpoint and the physical port comprises a port on a forwarding card. Davis discloses the logical resource comprises a service endpoint and the physical port comprises a port on a forwarding card (col. 17, lines 14-27). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Davis with Factor to facilitate monitoring and management of physical resources by associating a template with the resource to facilitate message passing between the resources as supported in Davis (e.g. abstract).

Response to Arguments

35. Applicant's arguments filed October 18, 2004 have been fully considered but they are not persuasive.

36. In the remarks, Applicant argues, in substance, that (1) the system of Factor includes preconfigured logical resources and does not delay applying the configured

logical resource to the physical resource, (2) Applicant's teach a system resiliency manager that determines the policy for a fault, not running a distributed detection routine which detects system functional states as taught by Bruck, (3) Applicant has overcame the rejection of claim 25 since Examiner admits that neither Bruck nor Factor disclose a resource consumption notification as taught by the Applicants, (4) Applicants are claiming a plurality of logical resources that enable multiple processes to be independently started or stopped, while Allen is teaching an instance having a compilation of attributes which do not enable a process to operate, (5) the process described in Davis is not decoupled while Applicants' is decoupled, and (6) Davis does not teach the logical service comprises a service endpoint and a physical port.

37. As to point (1), the Office respectfully disagrees, a broad interpretation of the claim, as well as interpreting what is meant by "adding servers or replicating physical processes" provides the necessary motivation in order to delay applying a logical resource to a physical resource. In the case of Factor, the "applying" would be the mapping of the logical process to the physical process. As such, one of ordinary skill in the art would understand that the logical process would not map to a physical process if it is not installed in the computer system. Therefore it would be obvious to understand that the physical address (i.e. of the newly added server col. 6, lines 1-4) would not be utilized in the logical process until the physical resource is added to the computer system. By this rationale, the rejection is maintained.

38. As to point (2), in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

39. As to point (3), although it is stated that Bruck nor Factor do not disclose this feature, it is not disclose that this would be a nonobvious feature to the system. Resource consumption notifications are well known in the art. Furthermore, Bruck discloses that the system functional state can be "any condition which may prevent the operation of the network" (col. 2, lines 25-30). One of ordinary skill in the art would understand the benefits of incorporating the resource state with a consumption notification since it would allow the detection routine to monitor the relative health of the resource and could load balance the system accordingly. By this rationale, the rejection is maintained.

40. As to point (4) Applicant is not claiming that the logical resources enable multiple processes to be started or stopped, merely that the functional processes are configured on particular logical resources which are mapped to physical resources. The operating system enables the processes to be independently started and stopped. Furthermore the attributes enable the process to operate since without the attributes, the process

would not be able to receive the value requested or change any attributes of the logical resource. By this rationale, the rejection is maintained.

41. As to point (5), in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., decoupled processes) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

42. As to point (6), it is assuming that the "logical service" Applicant discusses would be the claimed "logical resource". Applicant will appreciate that *the set* of end points (i.e. logical resources) is what describes all the physical (i.e. physical port) and logical ports available. By this rationale, the rejection is maintained.

Conclusion

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA
October 12, 2005

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